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CHEMICAL OCEANOGRAPHY

TILTON SCHOOL
TILTON, NH
AUG 12 - 17, 2001

Steven Emerson, Chair
Dave DeMaster, Vice-Chair

Sunday PM

Ocean Chemistry, Dynamics and Climate

Session Chair: **Scott Doney**, National Center for Atmospheric Research, Boulder, CO

- **Nicolas Gruber**, University of California, Los Angeles, CA
"The influence of NAO on the carbon cycle in the North Atlantic Ocean"
- **Richard Matear**, CSIRO, Hobart, Australia
"Changes in ocean biogeochemistry caused by protracted global warming"

Monday AM

Rapid Climate Change

Session Chair: **Thomas Stocker**, University of Bern, Bern, Switzerland

- **Richard Alley**, Penn State University, University Park, PA
"Causes of abrupt climate changes: insights from timing"
- **Olivier Marchal**, University of Bern, Bern, Switzerland
"Atmospheric radiocarbon during the Younger Dryas: Production, ventilation, or both"
- **Paul Baker**, Duke University, Durham, NC
"Climatic variability of tropical South America at annual to orbital time scales"

Monday PM

Chemical Proxies of Past Climate Change

Session Chair: **Adina Paytan**, Stanford University, Stanford, CA

- **Howard Spero**, University of California, Davis, CA
"Carbon isotopes and the marine record: from enigma to maturity"
- **Mark Pagani**, Colorado State University, Fort Collins, CO
"An examination of the boron isotope proxy"

Tuesday AM

The Nitrogen Cycle

Session Chair: **Bess Ward**, Princeton University, Princeton, NJ

- **Daniel Sigman** and **Karen Casciotti**, Princeton University, Princeton, NJ
"Coupled measurements of nitrogen and oxygen isotopes in oceanic nitrate: A new tool for the study of the marine nitrogen cycle"
- **Bess Ward**, Princeton University, Princeton, NJ
"Functional diversity in microbially mediated nitrogen cycling"
- **Stefan Hulth**, University of Goteborg, Goteborg, Sweden
"Nitrogen transformations in marine sedimentary environments - alternative pathways of anoxic oxidations"

Tuesday PM

Sediment Geochemistry

Session Chair: **Robert Anderson**, Lamont-Doherty Earth Observatory, Palisades, NY

- **Derek Lovley**, University of Massachusetts, Amherst, MA
"Novel microbially catalyzed redox reactions in marine sediments"
- **Philip Froelich**, Georgia Institute of Technology
"Reverse weathering, authigenic aluminosilicate formation and early silica diagenesis in marine sediments"

Wednesday AM

Gas Hydrates

Session Chair: **Erwin Suess**, GEOMAR, Kiel, Germany

- **Gregor Rehder**, Monterey Bay Aquarium Research Institute, Moss Landing, CA
"Experimental tests of mechanisms for rapid transfer of methane from the sea floor to the atmosphere"
- **Mariam Kastner**, Scripps Institution of Oceanography, La Jolla, CA
"Environmental implications of methane venting across the sediment-water interface: Results of a one year in situ experiment at Hydrate Ridge, Cascadia"
- **Matthias Haeckel**, GEOMAR, Kiel, Germany
"Gas hydrate dynamics in surface sediments of Hydrate Ridge: Geochemistry, isotopes, biomarker and modeling studies"

Wednesday PM

Molecular Organic Chemistry

Session Chair: **Tim Eglinton**, Woods Hole Oceanographic Institution, Woods Hole MA

- **Dan Repeta**, Woods Hole Oceanographic Institution, Woods Hole, MA
"New concepts on the composition and cycling of dissolved organic matter in seawater"
- **Stefan Schouten**, Netherlands Institute for Sea Research, den Burg, The Netherlands
"Molecular isotope biogeochemistry: applications in determining processes in contemporary and past oceans"

Thursday AM

Inorganic Chemistry - Metals

Session Chair: **James Moffett**, Woods Hole Institution of Oceanography, Woods Hole, MA

- **Edward Boyle**, Massachusetts Institute of Technology, Cambridge, MA
"New insights into iron geochemistry through high resolution automated sampling and ICP-MS analytical methods"
- **Katherine Barbeau**, University of California, Santa Barbara, CA
"Photochemical cycling of iron in the surface ocean mediated by iron (III)-siderophore complexes: mechanistic insights from molecular structure"
- **Ariel Anbar**, University of Rochester, NY
"Metal isotope fractionation in chemical oceanography: Promise and progress"

Thursday PM

Remote Measurements

Session Chair: **Ken Johnson**, Monterey Bay Aquarium Research Institute, Moss Landing, CA

- **Charlie Eriksen**, University of Washington, Seattle, WA
"Gliders: Platforms for biogeochemical measurements"
- **Ken Smith**, Scripps Institute of Oceanography, CA
"Benthic Rovers as platforms for biogeochemical measurements"



CHEMICAL OCEANOGRAPHY

TILTON SCHOOL
(12-Aug-01) - (17-Aug-01)

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Only those who have been **Accepted** or **Registered** will have their names listed below. Names of people who have only applied and have yet to be accepted will NOT appear.

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